

## **Leisure Preference and Corporate Tax Planning**

### **Abstract**

Using a novel cross-country measure of leisure preference to quantify managerial effort aversion, we examine its relation to corporate tax avoidance, and document a negative association between the two. The result is stronger for firms located in countries with a more complex tax system, and for firms with less access to tax consulting services — situations in which corporate tax planning can be especially onerous. Finally, tax planning appears to be one mechanism mediating the negative relation between leisure preference and firm value, implying that effort aversion is a source of agency costs that impedes value-enhancing tax planning activities.

**Keywords:** effort aversion; leisure preference; agency costs; tax planning

**JEL Codes:** H26, G30, G32, J22, Z10

*He that loveth pleasure shall be a poor man; he that loveth wine and oil shall not be rich.*

— *King James Bible, Proverbs 21:17*

Agency problems afflict all corporations. These problems could originate from multiple sources and take various forms. In the context of corporate tax planning, two sources of agency problems have been commonly identified and studied. One agency view links tax planning to managerial rent extraction. In particular, Desai and Dharmapala (2006) argue that corporate tax planning could create opaqueness, which facilitates managerial resource diversion. The other agency view treats tax planning as a risky investment that could involve large uncertainties and impose significant risk on both firms and managers. Rego and Wilson (2012) suggest that equity risk incentives need to be in place to induce risk-averse managers to undertake risky tax planning. Both views are, nevertheless, subsequently challenged. Specifically, there is evidence that corporate tax planning is not related to opaqueness, but instead is negatively related to fraud risk (Lennox, Lisowsky, and Pittman (2013)), and positively associated with internal information quality (Gallemore and Labro (2015)). Evidence is also mixed on whether corporate tax avoidance increases both firm risk (Dyreng, Hanlon, and Maydew (2017), Guenther, Matsunaga, and Williams (2017)) and risk of forced CEO turnover (Gallemore, Maydew, and Thornock (2014), Chyz and Gaertner (2018)).

In this paper, we introduce a third agency perspective on corporate tax planning. We regard corporate tax planning as a task that, while having the potential of enhancing firm value, demands considerable effort, diligence, commitment, and initiative from managers. This agency view,

though largely neglected in the tax planning literature, is consistent with the assertion in the seminal Jensen and Meckling (1976) that managerial effort aversion could well be the foremost source of agency conflict. Specifically, they postulate:

*“[I]t is likely that the most important conflict arises from the fact that as the manager’s ownership falls, his incentive to devote significant effort to creative activities such as searching out new profitable ventures falls. He may in fact avoid such ventures simply because it requires too much trouble or effort on his part to manage or to learn about new technologies. Avoidance of these personal costs and the anxieties that go with them also represent a source of on-the-job utility to him and it can result in the value of the firm being substantially lower than it otherwise could be.”*

Such a view also resonates with the claim of Bertrand and Mullainathan (2003) that managers may prefer living a quiet life to building a large empire. These authors find that, after managers are insulated from corporate takeovers, there is a reduction in the destruction of old plants as well as the creation of new plants, both of which are effort- and time-consuming activities.

In a similar spirit of these two ground-breaking works, our paper examines how managerial effort aversion affects corporate tax avoidance. There are several reasons why tax avoidance activities can be onerous and personally costly. First, identifying tax avoidance opportunities requires a thorough understanding of firm operations as well as sophisticated knowledge of tax laws. Second, implementing tax planning strategies (e.g., transfer pricing schemes) often involves inter-segment, even cross-country, negotiation and coordination, which entails significant transaction costs. Third, corporate tax planning requires meticulous efforts to secure tax savings

against the tax authority. All these costs and complexities could make effort-averse managers reluctant to undertake value-enhancing tax planning activities.<sup>1</sup>

The possibility of underinvestment in corporate tax planning has already raised concerns in the business community. For instance, a number of prominent activist hedge funds voiced their discontent with slacks and inefficiencies in corporate tax planning, and explicitly requested managers to more vigorously pursue value-maximizing tax strategies (Cheng, Huang, Li, and Stanfield (2012)). A notable example can be found in the Schedule 13-D/A filing of a high-profile hedge fund activist, Third Point, who complained about the CEO of its target company, *PDL BioPharma*.<sup>2</sup>

*“Mr. McDade lacks the ability to communicate with the investment community effectively in part because he has a poor understanding of even basic financial concepts - another major concern we have communicated to the PDL Board many times. As we have discussed, he was puzzled when we discussed the concept of internal rate of return (IRR) analyses on research and development projects, and indeed called us back to ask what we meant by this. He readily admitted to us that **he has not properly thought through nor effectively utilized PDL's tax credits**, which has and will result in reduced value for PDL shareholders. (We do not mean to suggest that PDL's CEO must be a tax expert - **all we expect is that he or she take***

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<sup>1</sup> It is important to note that we use managerial effort aversion to refer to distaste of effort among not only top executives, but also lower-level managers (and employees) who are directly involved in tax planning activities.

<sup>2</sup> The full text of the filing is available at <http://www.sec.gov/Archives/edgar/data/882104/0000899140-07-001301.txt>.

*ownership of the issue and develop a plan with the appropriate experts rather than ignoring an important and readily exploitable Company asset.)” [Emphasis added]*

The preceding discussions suggest a plausible and important conceptual link between effort aversion and corporate tax planning. Our next step is to test this new agency view of tax planning empirically. One fundamental challenge in testing the agency view of corporate tax planning is quantification of agency cost (Shackelford and Shevlin (2001)). The particular form of agency conflict in our research context is managerial effort aversion, which is elusive and difficult to measure. In this paper, we employ an innovative approach to quantifying effort aversion by exploiting the cross-country variation in leisure preference. Our data source is the World Values Survey (WVS), which conducted six waves of large-scale global surveys on a number of cultural values and beliefs (including attitudes toward leisure) from 1981 to 2014.<sup>3</sup> This leisure attitude metric has several desirable properties in capturing managerial aversion to effort. First, several economic models (Voss (1967), Killingsworth (1993)) characterize the representative agent as facing a work-leisure tradeoff, in which the opportunity cost of work is the forgone benefit of leisure.<sup>4</sup> Second, the six waves of surveys provide *time-variant* measures of attitudes toward work versus leisure, which enable us to include country fixed effects to purge time-invariant country-specific factors and better identify the economic effects of leisure preference.<sup>5</sup> Finally, the work-

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<sup>3</sup> While the survey subjects are not restricted to managers, executives should share common civic attitudes with the general population in the same country (Dyreng, Mayew, and Williams (2012)).

<sup>4</sup> The labor-leisure tradeoff is also widely discussed in literature in sociology. See, for example, an extensive literature review in Haworth and Veal (2004).

<sup>5</sup> In earlier economic models, leisure preference is often treated as a constant term. Recent research starts to place a greater emphasis on the “time-varying” components of cultural attitudes, because it is increasingly recognized that many cultural values and beliefs (including attitudes toward work and leisure) have changed substantially over time in response to changes in economic conditions, technologies, and institutions (e.g., Giavazzi, Schiantarelli, and

leisure tradeoff is plausibly relevant in the context of corporate tax planning. A stronger leisure preference indicates that a greater weight is assigned to leisure over work, making corporate tax planning marginally more costly and thus more undesirable to firm executives.

After we impose a few data requirements, our final sample comprises 186,870 firm-year observations from 41 countries and covers a period from 1992 to 2013. Our baseline results show a strong, negative association between corporate tax planning intensity and leisure preference. This suggests that firms engage less in corporate tax planning in countries with a stronger leisure preference. The effect of leisure preference on tax planning is also economically significant. Moving from the 25<sup>th</sup> percentile of leisure preference to its 75<sup>th</sup> percentile increases tax payments by 6.52% of pre-tax earnings. This finding is robust to alternative measures of leisure preference, alternative samples, and a variety of alternative explanations. In an additional analysis, we use worldwide work time reforms as staggered shocks to leisure preference to examine the marginal effect of leisure preference on tax planning. We find that firms engage less in tax planning after a country implements a work time reform that advances leisure time. The effect is asymmetric, though. There is no evidence that firms engage more in tax planning after a work time reform that shortens leisure time.

Next, we identify two situations in which corporate tax planning can be particularly arduous to managers. The first scenario is the existence of a complicated country-level tax system. When a

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Serafinelli (2009)). Elgin and Yucel (2014) find large cross-country and time-series variations in leisure preference, which renders the assumption of a constant leisure preference in economic modeling inappropriate. Several important international surveys of cultural values also indicate significant intertemporal shifts in attitudes toward work and leisure.

country has a labyrinthine tax system, engagement in tax planning requires greater efforts, and shirking of effort-averse managers could then be exacerbated.<sup>6</sup> We use the World Bank data on time to prepare and pay taxes to measure home country tax system complexity. The second situation is limited access to external tax consulting services, proxied by the number of country-level tax consulting firms. Tax planning naturally demands more managerial effort when external assistance is scarcer. Consistent with our predictions, we find that the negative relation between leisure preference and corporate tax avoidance is stronger when the firm's home country has a more complex tax system or when there are fewer external tax consulting services.

Lastly, we conduct an exploratory analysis of the value implications of leisure preference. We find that firm value is lower in countries with a stronger preference for leisure. This finding is consistent with the notion that effort aversion (as captured by leisure preference) creates a significant disincentive for value-enhancing activities. What interests us more is the extent to which leisure preference lowers firm value via its impact on corporate tax planning. Through a path analysis, we find that corporate tax planning mediates around 5% of the negative association between leisure preference and firm value. This result suggests that leisure preference is a non-negligible source of agency costs that causes firm value to be lower than it otherwise could be, consistent with the prescient warning of Jensen and Meckling (1976).

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<sup>6</sup> There are many discussions in the business media on how the overly complicated tax system in the U.S. has imposed unduly heavy burdens on businesses and individuals, and caused them to pass up legitimate tax-saving opportunities such as governmental tax breaks and subsidies (e.g., McKinnon (2012)). A recent working paper, Zwick (2018), also finds that corporate tax complexity significantly deters eligible U.S. firms from claiming refunds for tax losses.

We contribute to the literature in several ways. First, we introduce a new source of agency conflict into the context of corporate tax planning. An examination of agency conflict in corporate tax planning is important, as agency costs are important non-tax costs in Scholes and Wolfson's (1992) "all parties, all taxes, and all costs" framework (Shackelford and Shevlin (2001)). Prior studies have identified two sources of agency problems associated with corporate tax planning — managerial rent extraction and managerial risk aversion. Nevertheless, neither agency views are consistently supported by empirical evidence. In this paper, we propose incorporation of a third, important, source of agency conflict: managerial effort aversion (Jensen and Meckling (1976), Bertrand and Mullainathan (2003)). Using a novel measure of cross-country variation in leisure preference to quantify effort aversion, we find evidence suggesting that effort aversion (as captured by leisure preference) is an important consideration in tax planning decisions and provides managers with a disincentive for engaging in corporate tax planning.

Second, we shed new light on the "under-sheltering puzzle" that has long baffled tax scholars. Weisbach (2002) is among the first to question why firms do not fully take advantage of tax planning opportunities given the relatively low risk of tax audits and penalties. Experimental tax research also suggests that tax compliance appears to be higher than implied by plausible audit rates, penalties, and levels of risk aversion (Alm, McClelland, and Schulze (1992), Kleven, Knudsen, Kreiner, Pedersen, and Saez (2011)). The under-sheltering puzzle stimulates recent research on factors that possibly induce underinvestment in corporate tax planning, such as religiosity and trust (Boone, Khurana, and Raman (2012), Hasan, Hoi, Wu, and Zhang (2017)).



Our study adds to this strand of literature by suggesting managerial leisure preference as another hindrance to value-maximizing corporate tax avoidance.

Finally, our study contributes to the literature that explores the implications of managerial effort aversion. While managerial effort aversion is an important theoretical construct of agency conflict, empirical tests of its implications have been difficult because effort aversion is unobservable and thus hard to quantify. Previous studies have to make inferences about the existence of managerial effort aversion from the relation between intensity of certain corporate activities (such as restructurings) and corporate governance mechanisms, for example, takeover threats (Bertrand and Mullainathan (2003)), public ownership (Bernstein (2015)), and shareholder activism (Cheng et al. (2012)). We complement these studies by providing a novel way to quantify managerial effort aversion. We draw on the standard economic modeling of an agent's utility function and use leisure preference to capture the agent's tendency of effort aversion.

Our paper proceeds as follows. Section 2 reviews the literature and develops our hypothesis. Section 3 discusses the research design. Section 4 presents baseline results and robustness tests. Section 5 conducts cross-sectional analyses, and examines value implications of leisure preference. Section 6 concludes.

## **I. Leisure Preference and Tax Planning**

### **A. Related Literature**

Over the past decades, corporate tax planning literature has evolved within the Scholes and Wolfson's (1992) "all costs, all taxes, all parties" framework. Earlier studies focus on how

financial reporting costs are incorporated into corporate tax planning. Agency costs as important non-tax costs have received little attention prior to 2000s. As Shackelford and Shevlin (2001) note, “[r]esearch addressing taxes and agency costs is much less well developed.”

Desai and Dharmapala (2006) identify the first source of agency problem associated with corporate tax planning. They argue that corporate tax planning and managerial rent diversion are complementarities. The essential underlying premise is that corporate tax planning often engenders opaqueness, which can be exploited by managers to mask their rent extraction activities, such as earnings management, related-party transactions, and perquisite consumption. This agency view underpins many subsequent studies. For example, Chen, Chen, Cheng, and Shevlin (2010) find that family firms use less aggressive tax planning strategies to alleviate concerns from minority shareholders over their possible rent extraction behaviors. Lanis and Richardson (2011) find that more outside directors on a board reduce corporate tax planning. The reason is that outside directors are more effective in monitoring managers’ rent extraction behaviors. Kim, Li, and Zhang (2011) find that corporate tax planning increases stock price crash risk because managers are able to hoard bad news with opaque tax avoidance transactions. A central assumption underlying Desai and Dharmapala’s (2006) rent extraction argument as well as its subsequent studies is that corporate tax planning creates information opaqueness. However, more recent studies have begun to challenge this assumption. For example, Gallemore and Labro (2015) find that corporate tax planning is associated with better internal information environment.<sup>7</sup> Similarly, Lennox,

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<sup>7</sup> They use four proxies for internal information quality: (1) the speed with which management releases earnings announcements; (2) the accuracy of earnings forecast; (3) the absence of material weakness in internal control; and (4) the absence of restatement due to errors.

Lisowsky, and Pittman (2013) find that tax aggressive firms are less likely to commit accounting fraud. These results suggest a positive association between corporate tax planning and information transparency, contradicting Desai and Dharmapala's (2006) assumption about the implication of corporate tax planning for information opaqueness.

More recent studies take an alternative agency view on corporate tax planning. Rego and Wilson (2012) suggest that corporate tax planning is a form of risky investment to firms and their managers. When managers are risk averse, they are reluctant to undertake risky tax planning strategies due to career concerns. However, whether corporate tax planning is risky is still inconclusive. While Dyreng et al. (2017) find that tax aggressive firms bear greater tax uncertainty, Guenther et al. (2017) find little evidence that corporate tax planning is associated with overall firm risk. Furthermore, evidenced is mixed as to whether corporate tax planning intensifies managers' career concerns. Gallemore et al. (2014) find no evidence that aggressive corporate tax planning increases forced CEO turnover. Chyz and Gaertner (2018), however, find that corporate tax planning does affect forced CEO turnover, but their relation is U-shaped. That is, both too much and too little corporate tax planning contribute to forced CEO turnover. These results cast doubt on the risk-related agency theory of corporate tax planning.

## **B. Effort aversion**

In this study, we introduce a new agency perspective on corporate tax planning. We view corporate tax planning as a complex task that requires substantial effort inputs and thus are undesirable to effort averse managers.

Though largely neglected in the tax planning literature, effort aversion has been one of the

quintessential perspectives in the agency framework since the seminal work of Jensen and Meckling (1976). Jensen and Meckling emphasize that managerial effort aversion is likely the most important source of agency conflict between managers and shareholders. A manager may avoid value-maximizing activities because they require too much trouble or effort on her part. Such avoidance of personal costs can result in a significant loss of firm value. These arguments are consistent with the long-held observation in history and literature that human beings tend to avoid efforts (physical and spiritual), desire ease and comfort, and recline on “a bed of sloth”. This “innate” distaste of effort is characterized by Goethe in his classic, *Faust*. In the Prologue in Heaven, the Lord remarks: “For man’s activity can easily abate, / He soon prefers uninterrupted rest; / To give him this companion hence seems best / Who roils and must as Devil help create.”<sup>8</sup>

The tendency of managers to avoid spending efforts is empirically supported by Bertrand and Mullainathan (2003). Their finding suggests that, after a reduction in takeover threats, managers are less willing to destroy old plants as well as create new ones, both of which demand considerable efforts. They conclude that managers prefer a quiet life to empire building.

Empirically, effort aversion is difficult to observe and quantify. In this paper, we use an innovative approach to capture and measure managerial effort aversion based on survey responses on civic attitudes toward work and leisure. These attitudes toward work and leisure “have been central themes in human cultural development since the earliest times” (Haworth and Veal (2004)).

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<sup>8</sup> Goethe's *Faust*, trans. and ed. *Walter Kaufmann*. New York: Anchor Books, 1962.

How leisure preference affects the choice of effort can be illustrated by the following utility function of a representative agent (Bitler, Moskowitz, Vissing-Jorgensen (2005)):

$$U(c, u) = \frac{1}{1-r} (c^\theta (1-u)^\theta)^{1-r}, \quad (1)$$

where  $u$  is work effort,  $1-u$  is leisure, and  $\theta$  is leisure preference.<sup>9</sup> Work effort causes disutility while leisure adds to the utility. Effort aversion, therefore, is attributed to the reluctance to forgo leisure (Sudit (2012)). A stronger preference for leisure makes an agent attach greater importance to leisure over work in her utility function. In other words, leisure preference causes more disutility for a given level of effort and, therefore, results in more severe effort aversion.

Several recent studies also use international surveys of cultural values to measure leisure preference.<sup>10</sup> Specifically, Giavazzi, Schiantarelli, and Serafinelli (2009) use the World Values Survey (WVS) and the European Social Survey (ESS) to measure individual attitudes toward work and leisure. They find that leisure preference is an important determinant of both women employment rates and hours worked. Using ESS, Moriconi and Peri (2016) document an economically significant effect of leisure preference on individual employment rates across European countries. Following these two studies, we exploit the cross-country variation in leisure preference revealed in WVS and examine its implications for corporate tax planning.

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<sup>9</sup>  $u$  and  $1-u$  can be understood as the fractions of time devoted to work and leisure, respectively. Such a “residual” definition of leisure is widely accepted and used in the literature (e.g., Roberts (1999)). It is certainly a simplifying assumption, given the need to allocate time to other activities (such as sleeping and eating). However, time for these other activities is relatively nondiscretionary and usually either neglected or modeled as a constant term. Therefore, the principal tradeoff for the agent is to choose between work and leisure.

<sup>10</sup> Elgin and Yucel (2014) adopt a different approach. They construct a dynamic general equilibrium model and back out values of leisure preference.

### **C. Hypothesis development**

Corporate tax planning is a demanding task that requires significant efforts. First, to identify constantly changing tax planning opportunities (Milles, Erickson, and Maydew (1998)), managers need to maintain a thorough understanding of firm operations, including firms' business model, production process, segment operations, and related party transactions. Next, managers need to apply tax law to business operations. Often, tax law is complex, and tax rules and regulations change frequently over time. Thus, learning and updating tax knowledge are also effort consuming. Even if managers may not themselves design tax planning schemes but instead rely on assistance from internal and external tax experts, managers, as the ones who "set the tone at top", still need to evaluate and choose among alternative tax planning strategies. This makes an understanding of firm operations and tax knowledge the necessary effort inputs in developing tax planning opportunities.

Second, implementing tax planning strategies requires substantial efforts to coordinate and rebalance corporate resources. Many tax planning strategies involve inter-department coordination. For example, an investment in municipal bonds requires coordination between the tax department and the financing department, and tilts capital structure choices toward debt financing. Tax planning strategies using, for example, first-in-first-out (FIFO) and last-in-first-out (LIFO) financial reporting methods require firms to balance tax reporting and financial reporting, and to coordinate between the tax department and the accounting department. Some tax planning strategies need inter-segment coordination. For example, tax haven operations entail the establishment of new subsidiaries and compliance with foreign tax laws. Transfer pricing

transactions rely upon coordination of production activities between the parent company and foreign subsidiaries. Certain tax planning strategies even necessitate inter-company coordination. For instance, lease-in-lease-out (LILO) transactions require firms to lease a long-lived property from a third party and lease out immediately to the same party. Such extensive and subtle planning, balancing, and coordination could make tax planning a daunting task for managers.

Third, securing savings from tax planning activities is also practically and legally challenging.<sup>11</sup> Tax planning activities are subject to tax audits, fines, and penalties. Upon tax audits, tax authorities not only have access to firms' tax-related information, but also other relevant information including all their books, records, and papers. Therefore, firms need to spend substantial efforts to communicate and negotiate with tax authorities during the periods of tax audits. In addition, tax planning activities often arouse tax disputes between firms and tax authorities due to the complexity and ambiguity of tax laws (Hanlon, Maydew, and Saavedra (2017)). To resolve tax disputes, firms and tax authorities often turn to tax arbitrages or tax courts. However, the resolution process can be both convoluted and protracted.

For the aforementioned reasons, corporate tax planning takes significant managerial effort and is personally costly.<sup>12</sup> As a result, managers who are effort-averse can be reluctant to engage in this laborious task. With other factors kept constant, the preference for leisure amplifies a

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<sup>11</sup> For instance, in a legal dispute with IRS over its disallowance of 17 years' federal research tax credits, Bayer Group complained that it would take many years to gather all the required documents to fully comply with the IRS demand (McKinnon (2012)).

<sup>12</sup> Firm managers could hire tax consultants and attorneys to partially alleviate the burden. However, such external help can be expensive, or is not always readily available. Even with outside help, tax planning process can still consume a significant amount of time and effort for firm managers and employees.

manager's loss of utility due to work. Given that corporate tax planning is an onerous task, managers who have a greater preference for leisure should engage less in corporate tax planning. We therefore hypothesize a negative association between leisure preference and corporate tax planning.

## **II. Data and Empirical Strategy**

### **A. Empirical proxy for leisure preference**

Our measure of leisure preference comes from the World Values Survey (WVS) database.<sup>13</sup> The WVS provides six survey waves on a number of cultural values, beliefs, and attitudes across countries (Wave 1: 1981-1984; Wave 2: 1990-1994; Wave 3: 1995-1998; Wave 4: 1999-2004; Wave 5: 2005-2009; and Wave 6: 2010-2014). We focus on the survey question: "Indicate how important leisure time is in your life, very important, rather important, not very important, and not at all important?"<sup>14,15</sup> Based on survey responses to this question, we use the percentage of

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<sup>13</sup> The World Values Survey database is maintained by an international team of scholars affiliated with World Values Survey Association and World Values Survey Association Secretariat. The database provides survey data starting from 1981 and covers a large number of countries worldwide. The WVS database has been used by many studies in economics, for example, Knack and Keefer (1997), Guiso, Sapienza, and Zingales (2004), Alesina et al. (2004), Alesina and Angeletos (2005), Giavazzi, Schiantarelli, and Serafinelli (2009), Guiso et al. (2004), and Layard et al. (2008).

<sup>14</sup> To measure leisure preference, Moriconi and Peri (2016) use the survey responses to the question: "I would enjoy having a paid job even if I did not need the money." However, this question is available in only one wave of the ESS surveys, preventing them from capturing the intertemporal shifts in leisure preference. By comparison, the survey question used in our study is available for all waves of WVS surveys.

<sup>15</sup> The survey question used by Giavazzi, Schiantarelli, and Serafinelli (2009) is "Here are some more aspects of a job that people say are important. Please look at them and tell me which ones you personally think are important in a job", where 1 denotes generous holidays being mentioned, and 0 otherwise. We believe that preference for generous holidays is likely one of many dimensions of leisure preference. In contrast, our survey question more directly asks about individual attitudes toward leisure, and provides an evaluation of *overall* leisure preference.



respondents who answer “very important” to quantify leisure preference.<sup>16</sup> Gennaioli, La Porta, Lopez-de-Silanes, and Shleifer (2012) use a similar way to quantify trust based on the World Values Survey database. A higher value of this measure indicates that agents in this country attach greater importance to leisure.

In Figure 1, we plot time-series of leisure preference for a few countries that are most heavily represented in our sample. We find a large cross-sectional variation in leisure preference among these sample countries. There is also a large time-series variation in leisure preference across years. To validate our measure of leisure preference, we present a scatter plot of leisure preference against actual weekly leisure hours in Figure 2. Data on weekly leisure hours (which is computed as total number of hours per week minus weekly hours worked) are obtained from the International Labor Organization. Consistent with prior research (Giavazzi, Schiantarelli, and Serafinelli (2009), Moriconi and Peri (2016)), we find a positive association between leisure preference and the number of weekly leisure hours. This positive association gives credence to our leisure preference measure as a reasonable proxy for effort aversion.

## **B. Empirical proxy for corporate tax planning**

Following two prior international tax studies, Atwood, Drake, Myers, and Myers (2012) and Li, Maydew, Willis, and Xu (2017), we use the formula below to calculate corporate tax planning.

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<sup>16</sup> Inferences are unchanged if we compute leisure preference as a weighted average response. Specifically, we assign numerical values 1-4 to “not at all important”, “not very important”, “rather important”, and “very important”, respectively. Each of the numerical values is then weighted by the corresponding percentage of people who answer “yes”. Next we aggregate these weighted values and scale the total score by 4.

$$TA_{ijt} = \frac{\sum_t^{t+2} PTE_{ijt} \times \tau_{jt} - \sum_t^{t+2} CTP_{ijt}}{\sum_t^{t+2} PTE_{ijt}}. \quad (2)$$

In Equation (2),  $TA$  denotes long-run corporate tax planning.  $PTE$  is pre-tax earnings.  $\tau$  is home country statutory corporate income tax rate.  $PTE \times \tau$  is tax on pre-tax income. It approximates the amount of taxes that should be paid.  $CTP$  is cash taxes paid. It captures the amount of taxes that is actually paid. A larger difference between the two indicates that firms actually pay less taxes as required and thus save more taxes through tax planning. This difference is further scaled by pre-tax earnings. Data on tax items come from Compustat Global database. Data on home country statutory income tax rates come from KPMG corporate tax rates table and the Trade Economics database.<sup>17</sup>

### C. Empirical model

To examine the association between leisure preference and tax planning, we follow the empirical strategy used in Liang and Renneboog (2017) and specify our baseline regression as follows:

$$TA = \beta_1 LEISURE + \Sigma X + \Sigma Z + \alpha + \delta + \theta + \varepsilon, \quad (3)$$

where  $TA$  is tax planning, calculated in Equation (2).  $LEISURE$  is leisure preference, constructed based on the World Values Survey database. Our focus is the coefficient on  $LEISURE$ . It captures

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<sup>17</sup> When the data on cash taxes paid are missing, we replace the missing values with current tax expenses defined as total tax expenses minus deferred taxes.

the association between leisure preference and tax planning. A negative coefficient on *LEISURE* will suggest that leisure preference creates a disincentive for corporate tax planning.

We add standard control variables following Atwood et al. (2012) and Li et al. (2017). We control for firm-level variables that potentially affect corporate tax planning. We first include a set of firm characteristics, including fundamental firm characteristics (*ROA*, *SIZE*, *LEV*, *GROWTH*, *MULTI*). Second, we control for tangible and intangible assets (*RD*, *PPE*, *INTAG*), and financial reporting (*DA*, *DWC*, *DNCO*, *DFIN*). Next, we include a set of country-level factors that capture country tax system characteristics such as conformity in book and tax reporting (*BTC*), worldwide versus territorial tax system (*WW*), statutory tax rate (*TAXRATE*), and tax enforcement (*TR*). We also control for country-level economic, financial, legal, and political development (*GDP*, *FINDEVP*, *LEGAL*, *CRP*). Appendix A details variable definitions and data sources.

We include year fixed effects ( $\alpha$ ) and industry fixed effects ( $\delta$ ) to control for differences in tax planning incentives across years and industries. Country fixed effects ( $\theta$ ) are included to purge time-invariant country characteristics such as legal origin and religion. Standard errors are clustered at the country level because our variable of interest is country-specific.

### **III. Results**

#### **A. Descriptive statistics**

We start by identifying firm-years from 1992 to 2013 of all countries covered by both the Compustat Global database and the World Value Survey database. Our sample starts in 1992

because this is the first year in which Compustat Global database became available. We end our sample in 2013 due to the data requirement for computing our long-run tax avoidance measure.<sup>18</sup> Our initial sample has 67 countries and 473,479 firm-year observations. We require all the variables used in our main analysis have non-missing values. This requirement restricts our sample to 54 countries and 193,995 observations. Further, we exclude from our sample those countries with fewer than 50 observations. This leaves us with 49 countries and 193,871 observations. Finally, we remove 8 countries with only one wave of WVS data because our implementation of the country fixed effects estimation requires at least two waves of data per country. Our final sample has 41 countries and 186,870 observations.

Figure 3 plots a world map for leisure preference and tax planning. We also report leisure preference and tax planning by country in Table I.<sup>19</sup> The least leisure-preferring countries are Viet Nam (0.490), Pakistan (0.507), Morocco (0.532), Philippines (0.554), Egypt (0.559), and China (0.579). For these countries, only about half of survey respondents believe that leisure is “very important” in their daily lives. At the same time, countries with greatest tax avoidance include Morocco (0.233), South Korea (0.231), Argentina (0.191), Colombia (0.189), Brazil (0.189), and China (0.173). Firms in these countries pay about 20 percent lower taxes as required by the government.

Table II formally compares tax planning between strong and weak leisure preference countries. We first note that the mean value of tax planning ( $TA$ ) for the full sample is equal to 0.089, very

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<sup>18</sup> At the time of the empirical analysis, the last year in which we have complete Compustat Global data is 2016.

<sup>19</sup> The sample periods differ across countries, mainly because country coverage varies in different waves of WVS surveys. In addition, statutory tax rates are sometimes missing in certain years for some countries.

similar to the value of 0.084 reported in Atwood et al. (2012). Comparisons of the mean values of tax planning (*TA*) show that firms located in countries with weak leisure preference engage more in tax planning. A parametric test (*t*-test) shows that this difference is significant at the 1% level. Comparisons of median values of tax planning (*TA*) yield a similar result. A non-parametric test (Wilcoxon rank-sum test) suggests that the difference is significant at the 1% level. Overall, these descriptive statistics reveal a systematic difference in tax planning between strong and weak leisure preference countries. We also find systematic differences in other firm and country characteristics between these two groups of countries. In particular, firms located in strong leisure preference countries tend to be more mature, rely more on intangible assets, report lower accruals, and appear to underperform. Also, countries with strong leisure preference impose high statutory tax rates, are more likely to adopt a territorial tax system, and require lower book-tax conformity. Leisure-preferring countries also have better economic, financial, legal, and political development than their more industrious peers. These statistics suggest that it is important to control for these firm- and country- level variables.

## **B. Main Results**

Table III reports our baseline regression results examining the impact of leisure preference on corporate tax planning. Columns (1) - (4) include different sets of control variables. In Column (1), we add no controls but the country-, year-, and industry-fixed effects. We find that the coefficient on *LEISURE* is significantly negative (-0.912,  $t = -5.57$ ). In Column (2), we add firm-

level controls. The coefficient on *LEISURE* remains significantly negative ( $-0.904$ ,  $t = -5.52$ ), and the magnitude of the coefficient is similar to that in Column (1). This suggests that leisure preference is almost orthogonal to firm-level controls. In Column (3), we add country-level controls. The coefficient on *LEISURE* remains negative ( $-0.348$ ,  $t = -3.27$ ). However, the magnitude of the coefficient drops, suggesting that leisure preference is potentially correlated with other country-level forces that affect corporate tax planning. In Column (4), we add the full set of control variables including the country-, year-, and industry-fixed effects. Again, the coefficient on *LEISURE* remains significantly negative ( $-0.338$ ,  $t = -3.24$ ). The result is economically significant as well. Moving from the 25<sup>th</sup> percentile of leisure preference (0.705) to its 75<sup>th</sup> percentile (0.898) increases tax payments by 6.52% ( $=0.338 \times 0.193$ ) of pre-tax earnings.

Overall, results with a set of control variables consistently support that leisure preference impedes tax planning activities. The signs of estimated coefficients on firm-level and country-level variables are generally consistent with those reported in Atwood et al. (2012) and Li et al. (2017).

## C. Robustness tests

### *C.1. Alternative Leisure Preference Measures*

We next examine whether our results are sensitive to alternative ways to quantify leisure preference. Our baseline regression uses a *raw* measure of leisure preference. We first examine whether our baseline result is sensitive to a *relative* measure of leisure preference. We define relative leisure preference as the ratio of leisure preference over work preference. Specifically, we divide the percentage of survey respondents who believe leisure to be “very important” in their

lives by the percentage of survey respondents who believe work to be “very important.” Column (1) of Table IV, Panel A reports the results. We find that the coefficient on relative leisure preference remains negative and significant. We also define a residual measure of leisure preference. This test is motivated by the concern that leisure preference is likely to be affected by other country-specific factors, such as demographics, economic conditions, and governmental labor policies. To reduce this concern, we calculate residual leisure preference by estimating a two-stage regression model.<sup>20</sup> In the first stage, we select potential determinants of leisure preference and estimate the regression residuals. In the second stage, we replace leisure preference with the residual leisure preference. Elgin and Yucel (2014) find that country-level leisure preference is associated with economic development, openness, temperature, population structure, and unemployment. We include in the first-stage regression all these variables. Variable definitions are provided in Appendix A. We find that consumption decreases leisure preference, whereas an elder population increases leisure preference.<sup>21</sup> Column (2) of Table IV, Panel A reports the second-stage regression. We find that the residual leisure preference is still negatively associated with corporate tax planning.

### *C.2. Alternative Samples*

We next examine whether our results are sensitive to alternative samples. Our sample comprises countries with a varied number of observations. Thus, it is likely that our results are unduly

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<sup>20</sup> A similar approach is used in Jenter and Lewellen (2015), who examine the impact of CEO retirement preferences on acquisitions.

<sup>21</sup> The first-stage regression results are reported in Internet Appendix table IA.I.

influenced by certain countries. We use alternative samples to alleviate this problem. First, we follow the methodology used in Atwood et al. (2012) to re-estimate our baseline regression using (1) country-year medians and (2) country-industry-year medians. Table IV, Panel B reports the results. We still observe a negative association between leisure preference and tax planning with these two samples. Second, we follow the methodology used in DeFond, Hung, Li, and Li (2015) to drop one country at a time from our sample. In untabulated results, inferences remain the same.

### *C.3. Alternative Theories*

In this section, we perform tests to rule out a variety of alternative explanations for our main finding. First, agents in strong leisure preference countries may be reluctant to undertake other corporate activities, such as investment and financing activities. Thus, the effect of leisure preference on tax planning can be a natural outcome of lost tax saving opportunities afforded by these other corporate activities. We examine whether the association between leisure preference and tax planning captures the effect of other effort consuming activities. To do so, we add to our baseline regression a number of corporate investment and financing variables, including capital investment (*CAPX*), acquisition (*ACQ*), equity and debt issuance (*EISSUE* and *DISSUE*). Column (5) of Table IV, Panel C shows that the coefficient estimate on *LEISURE* is little affected by the inclusion of other corporate activities.

Second, leisure preference could capture the effects of product market competition. Specifically, countries with strong leisure preference might also have a less competitive product market, which condones wastes and inefficiencies in firm operations including tax planning. To



rule out product market competition as an alternative explanation, we control for the revenue-based industry Herfindahl index. Column (6) of Table IV, Panel C shows that the coefficient estimate on *LEISURE* is largely the same.

Third, leisure preference might capture attitudes toward risk. Strong leisure preference can indicate greater risk aversion. We construct a measure of risk aversion from the World Values Survey database by calculating the percentage of respondents who answer “not at all” to the survey question “It is important to this person adventure and taking risks.” A higher value of this measure indicates a greater level of risk aversion. Column (7) of Table IV, Panel C reports the results controlling for risk aversion. We find that the coefficient estimate on *LEISURE* is similar as before.

Next, leisure preference may be correlated with tax morale, which in turn affects both tax compliance and tax enforcement. Specifically, residents in weak leisure preference countries (which tend to be economically and institutionally less developed) may find cheating on taxes more tolerable. As a result, tax payers have fewer scruples about evading taxes and also face lower costs and penalties. Alternatively, tax payers in weak leisure preference countries might have less trust in their government in public spending of tax revenue. Both explanations could have driven the observed negative relation between leisure preference and corporate tax avoidance. We construct two tax morale variables from the World Value Survey database. One variable describes the justifiability of cheating on taxes and the other describes trust in government. Column (8) of Table IV, Panel C reports the results controlling for tax morale. We find that the coefficient estimate on *LEISURE* is not affected by the inclusion of tax morale variables, albeit tolerance of tax cheating indeed increases tax avoidance.

Finally, government might have taken leisure preference into consideration when designing the tax system. This creates a possibility that leisure preference simply captures the heterogeneity in country tax system, which is not sufficiently controlled by those tax system attributes currently controlled in the regression (such as *BTC*, *TR* and *WW*).<sup>22</sup> To rule out this alternative story, we follow Keller and Schanz (2013) and include an aggregate tax attractiveness index, which captures 16 dimensions of a country's tax system. Column (9) of Table IV, Panel C reports the results. We find that the coefficient on *LEISURE* remains significantly negative and that the coefficient on tax system attractiveness *per se* is not significant.<sup>23</sup>

#### IV. Evidence from Work Time Reforms

The results so far support an average effect of leisure preference on tax planning, with leisure preference being negatively associated with tax planning. In this section, we examine a marginal effect of leisure preference on tax planning by exploiting the staggered work time reforms worldwide. The advance of leisure time indicates an increased preference for leisure (Cunningham (2014)). Work time legislations have been used by many governments to coordinate and alter attitudes toward work and leisure among individuals (Alesina, Glaeser, and Sacerdote (2005)). For instance, the UK has achieved expansion in leisure time principally through increases in paid holiday entitlement, from a norm of three weeks or less in 1971 to a norm of four weeks or more

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<sup>22</sup> Another concern is that a government might consider its citizens' leisure preference when setting its statutory tax rate. As shown in Internet Appendix table IA.II, we regress statutory tax rate on leisure preference (and controls), and find that these two are insignificantly related.

<sup>23</sup> We also re-estimate the regression by including all alternative explanations simultaneously. Results are reported in Internet Appendix table IA.III.

in the late 1980s (Haworth and Veal (2004)). Such increases in the availability of leisure time could reassert the status of leisure in the national culture and make people assign more importance to leisure over work. Alternatively, increases in leisure time could facilitate the realization of individual leisure preferences, which might have been previously constrained by lack of free time. Therefore, these reforms can be viewed as quasi-experimental shocks to leisure preference.

We identify work time reforms from the CBR Leximetric Datasets. The CBR Leximetric Datasets summarize labor laws for 117 countries over the period 1970 to 2013. Appendix B shows the details about country-years in our sample that had these work time reforms. Work time reforms involve changes in (1) annual leave entitlements, (2) public holiday entitlements, (3) limits to overtime working, (4) duration of the normal working, (5) maximum daily working time.<sup>24</sup>

Work time reforms provide us with an ideal setting to document a marginal effect of leisure preference on tax planning for at least two reasons. First, the staggered nature of work time reforms allows us to implement a difference-in-differences estimation. The treatment firms are those located in countries subject to at least one work time reform, which are compared with themselves prior to the reform and firms located in countries with no work time reform. Second, using the work time reforms enables us to detect an asymmetric effect of leisure preference, if any. Since some work time reforms advance leisure time while others shorten it, we are able to determine whether tax planning reacts to an increase or a decrease in leisure preference, or both. Following

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<sup>24</sup> The CBR Leximetric Datasets identify seven forms of work time reforms. In addition to the five mentioned above, the other two forms are (1) overtime premium and (2) weekend working. These two reforms concern changes in premium for overtime working, and thus are less relevant for our purpose. In a robustness check reported in Internet Appendix table IA.IV, we incorporate these two forms of work time reforms and find similar results.

the empirical strategy used in Heider and Ljungqvist (2015) and Mukherjee, Singh, and Žaldokas (2017), we specify the difference-in-differences estimation as:

$$\Delta TA_t = \beta_1 WTR_{t-1}^+ + \beta_2 WTR_{t-1}^- + \theta \Delta X_{t-1} + \delta \Delta Z_{t-1} + \alpha + \varepsilon_t, \quad (4)$$

where  $\Delta$  is the first-differencing operator. The changes model specification helps remove unobserved firm-specific fixed effects and better accommodates repeated shocks (Heider and Ljungqvist (2015)). The dependent variable is future change in tax planning.  $WTR_{t-1}^+$  and  $WTR_{t-1}^-$  are indicators equal to 1 if a country implements a work time reform in the previous year that increases or decreases leisure time, respectively. We add the same set of control variables as in Equation (2).  $X$  and  $Z$  represent firm-level and country-level controls, respectively.  $\alpha$  are industry-year fixed effects used to remove time-varying industry-level shocks.  $\varepsilon$  is the error term. Standard errors are clustered at the country level.

Table V reports our difference-in-differences regression results. We find that the coefficient on  $WTR^+$  is significantly negative, whereas the coefficient on  $WTR^-$  is insignificant. These results suggest an asymmetric effect of leisure preference on tax planning. Firms reduce tax planning after leisure time is advanced. However, there is no evidence that tax planning increases after leisure time is shortened. In terms of the economic significance, after a work reform that increases leisure preference, firms reduce tax planning intensity by 140 basis points.

## V. Economic Mechanism

Our baseline results show a negative association between leisure preference and tax planning. We argue that that a stronger preference for leisure makes managers more averse to efforts and,

thus, reduces their engagement in demanding tax planning activities. If effort aversion is the underlying economic mechanism, we should find that the negative association between leisure preference and tax planning is more pronounced when tax planning is particularly complicated and onerous for agents. To test for this underlying mechanism, we identify two such situations.

The first moderating factor we consider is home country tax system complexity. A complicated country tax system entails more efforts in corporate tax planning and should aggravate shirking by effort-averse managers. To measure tax system complexity, we use data on hours spent on preparing, filing, and paying taxes (Lawless (2013)). The data are obtained from the World Bank Paying Taxes Database. Because the data start in 2005 and are not available for most of our sample years, we construct a time-invariant tax system complexity variable (*TAXCOMP*).<sup>25</sup> We interact tax system complexity (*TAXCOMP*) with leisure preference (*LEISURE*). Our variable of interest is this interaction variable. Table VI, Column (1) reports the results.<sup>26</sup> We find that the coefficient on this interaction is significantly negative (-0.388,  $t=-2.04$ ). Therefore, a complex home country tax system strengthens the negative association between leisure preference and corporate tax planning. This finding suggests that leisure preference induces even less tax planning in the presence of a complex country tax system.

The second moderator is the access to external tax consulting. Corporate tax planning is more challenging and demanding when firms are located in countries with less access to outside tax

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<sup>25</sup> As shown in Lawless (2012), there is very little variation in tax system complexity across years. The year-over-year correlation approximates 95%.

<sup>26</sup> The two moderator variables are not reported in Table VI because their effects are subsumed by the country fixed effects.

consulting. We use the number of tax consulting firms within a given country to measure firms' access to external assistance in tax planning. Information on major tax consultants is obtained from International Tax Review (ITR) World Tax. The ITR World Tax divides tax consulting firms into different tiers (in most cases, tier-1 and tier-2). We scale the number of tier-1 tax consulting firms by the total number of publicly listed firms. As before, we create a time-invariant tax consulting variable (*TAXCONSULT*), as we can only obtain the latest information on tax consulting. We interact this variable with leisure preference (*LEISURE*). Our focus is the interaction between these two variables. Table VI, Column (2) reports the results. We find a significant positive association on this interaction term (0.592,  $t = 3.22$ ). That is, greater access to external tax consulting services weakens the negative association between leisure preference and corporate tax planning.

## VI. Value Implications

We next examine the value implications of leisure preference. If leisure preference suggests effort aversion that potentially impedes value-enhancing corporate tax planning, we should find leisure preference to be negatively associated with firm value. We use Tobin's Q as a measure of firm value, as in most cross-country studies (Claessens, Djankov, Fan, and Lang (2002), Lins (2003), La Porta, Lopez-de-Silanes, Shleifer, and Vishny (2002), Fauver, Hung, Li, and Taboada, (2017), Li et al. (2017)).

Table VII reports the results from examining the association between leisure preference and firm value. Column (1) only adds leisure preference and no control variables except for the country-, year-, and industry-fixed effects. We find that leisure preference is negatively associated

with firm value. In Column (2), we follow Villalonga and Amit (2006) and add a set of standard controls of firm value. We find that the negative impact of leisure preference on firm value continues to hold. In Column (3), we add the same set of control-level controls as in our baseline regression. Again, the coefficient on *LEISURE* remains significantly negative. Column (4) adds the full set of control variables and shows a similar result (-1.244,  $t = -3.16$ ).

We next perform the path analysis to determine whether corporate tax planning serves as a path through which leisure preference lowers firm value. Figure 4 depicts the influence of leisure preference on firm value via corporate tax planning. Our baseline results have established a negative association between leisure preference and corporate tax planning (path a). In addition, prior studies suggest a positive association between corporate tax planning and firm value (Desai and Dharmapala, 2009). Therefore, the mediated path by corporate tax planning (path  $a \times \text{path } b$ ) should be negative. This way, corporate tax planning should mediate the effect of leisure preference on firm value.

Table VIII reports the results on path analysis. We find that the direct path from leisure preference to firm value is significantly negative across all the specifications. In the mediated path for corporate tax planning, we first find a negative relation between leisure preference and tax planning, consistent with our baseline finding. Second, we find that corporate tax planning improves firm value, consistent with corporate tax planning on average being a value-enhancing activity. *Sobel* tests show that the mediated path by corporate tax planning is significant, equal to 5.3% of the total effect of leisure preference on firm value. These results together suggest that effort aversion as captured by leisure preference impedes value-enhancing corporate tax planning.

## **VII. Conclusion**

The emerging literature on the agency views of corporate tax planning has been gradually growing, but yielded inconsistent results. In this paper, we propose a new source of agency problems — managerial effort aversion — as an often-neglected but important determinant of corporate tax planning. Specifically, we argue that corporate tax planning is a difficult and laborious process that requires substantial effort. Managers with greater effort aversion should be more reluctant to undertake these activities. Using the cross-country variation in leisure preference to quantify the degree of effort aversion, we find that leisure preference is negatively associated with corporate tax planning. This effect is stronger when the country tax system is more complex or when firms have less access to external assistance in tax planning. Finally, we have some evidence suggesting that one of the reasons that leisure preference lowers firm value is by providing managers with a disincentive to engage in value-increasing tax planning activities.

It has been long recognized that shirking and inertia are pervasive in many settings, and especially severe when tasks are complex. Managers nowadays have to deal with a motley of challenging tasks that directly determine survival and success of their firms. It is thus critical to understand the effects of effort aversion on their decision-making. We advance the literature by providing the novel and important evidence on the relation between effort aversion and corporate tax planning.



Our study has at least three limitations, though. First, our research focuses on only one of the many daunting corporate tasks in which effort aversion creates economic wastes and inefficiencies. Future research could examine the implications of effort aversion for other corporate contexts including but not limited to product and process innovations, business expansions and divestitures, and capital structure decisions.

Another limitation of our study is that we do not account for the possibility that tax planning and other corporate activities compete for managerial time and effort. It will be an interesting extension to examine how effort aversion affects the amount of effort allocated to corporate tax planning in a multi-task setting. For instance, an effort averse manager might shift her efforts away from tax planning to other value-maximizing activities in which she has more knowledge, experience, and skills. Alternatively, a manager with a tax background, either out of overconfidence, or to capitalize on her relative specialty, might overinvest in complicated tax avoidance transactions while being negligent of her other, less familiar, tasks. Lastly, instead of using country-level cultural surveys to capture managerial risk aversion, one might examine traits of individual managers (e.g., country of origins, personal background, prior experiences) to directly identify their attitudes toward work and leisure.

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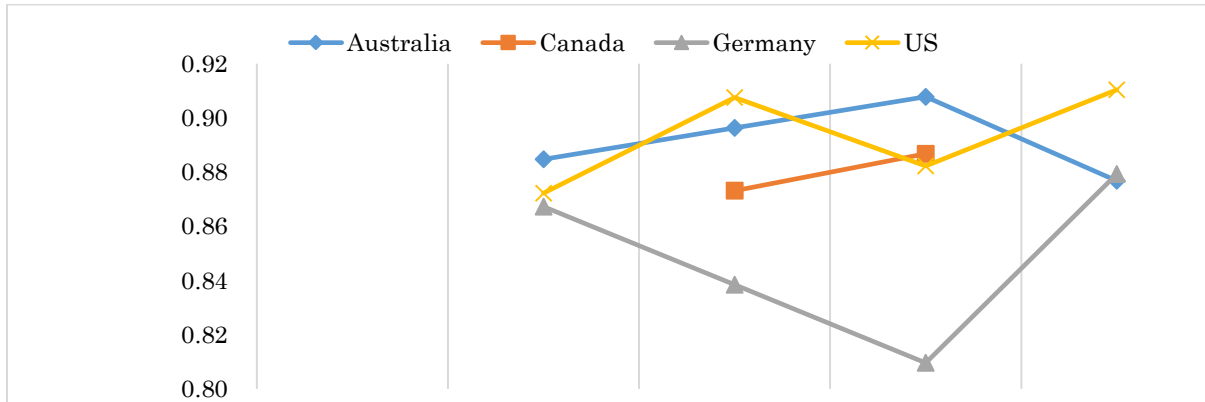
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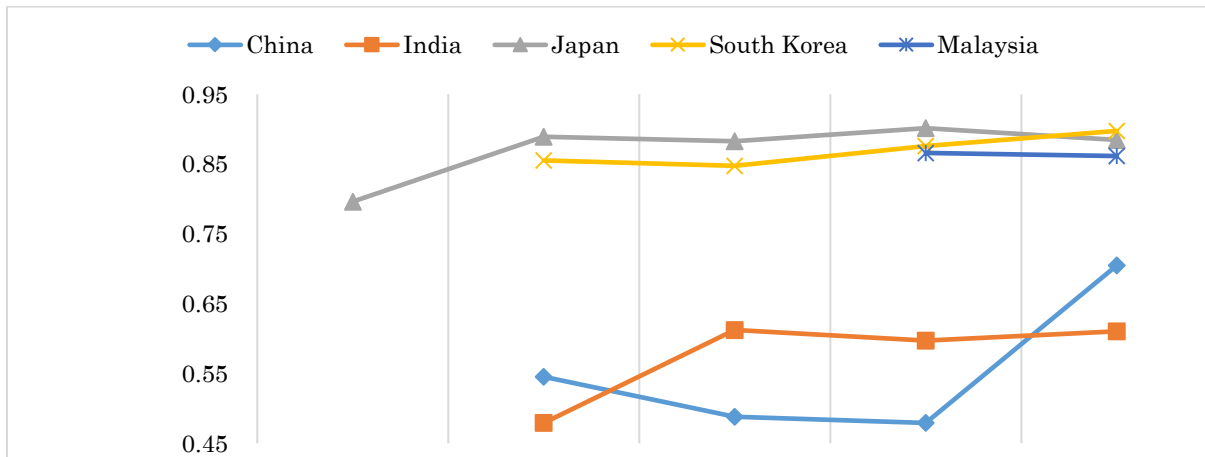
**Figure 1. Evolution of country-level attitudes toward leisure**

**Panel A. Western countries**



	Wave2	Wave3	Wave4	Wave5	Wave6
Australia		0.885	0.896	0.908	0.877
Canada			0.873	0.887	
Germany		0.867	0.838	0.810	0.879
US		0.872	0.908	0.882	0.910

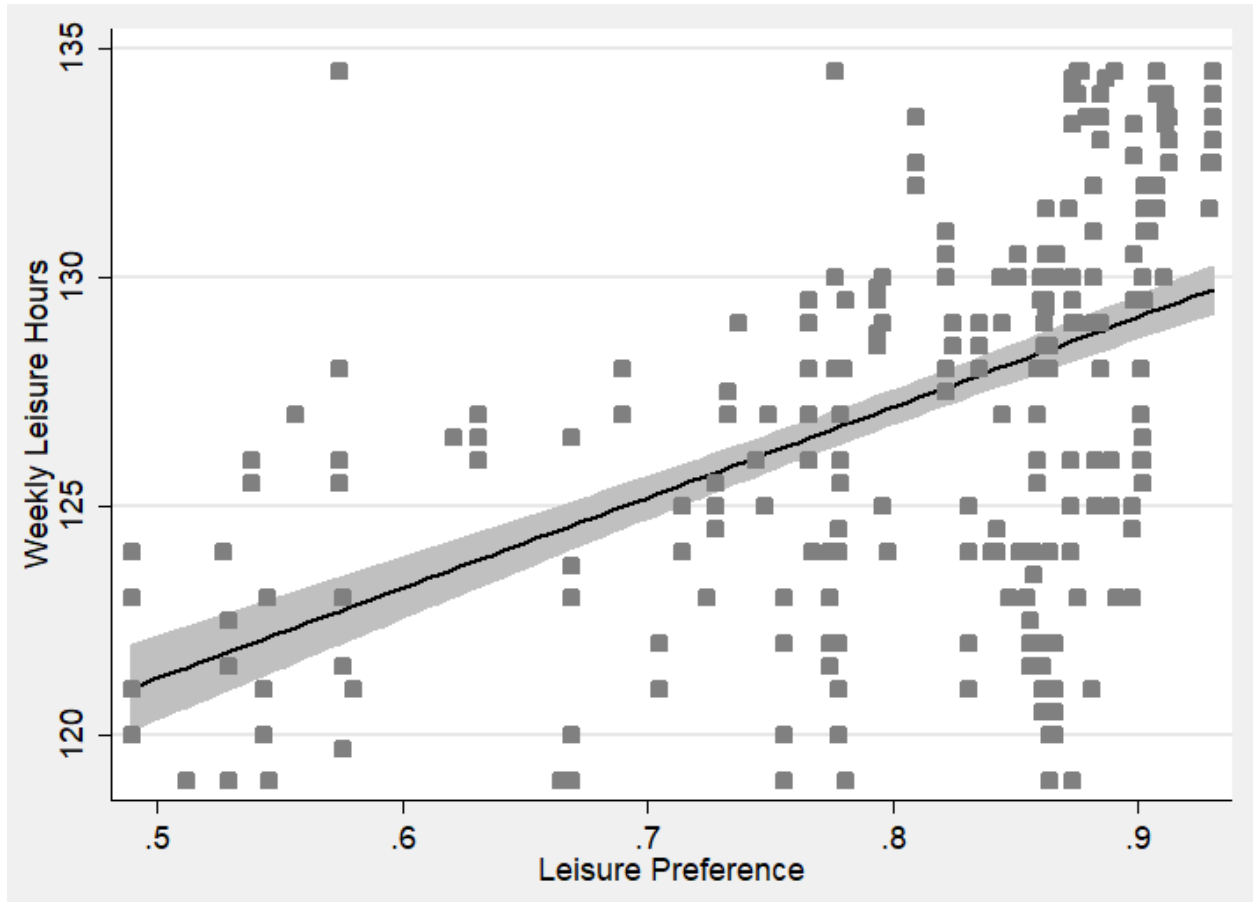
**Panel B. Asian countries**



	Wave2	Wave3	Wave4	Wave5	Wave6
China		0.545	0.488	0.479	0.705
India		0.479	0.612	0.597	0.610
Japan	0.796	0.889	0.883	0.901	0.885
South Korea		0.855	0.848	0.876	0.898
Malaysia				0.866	0.862

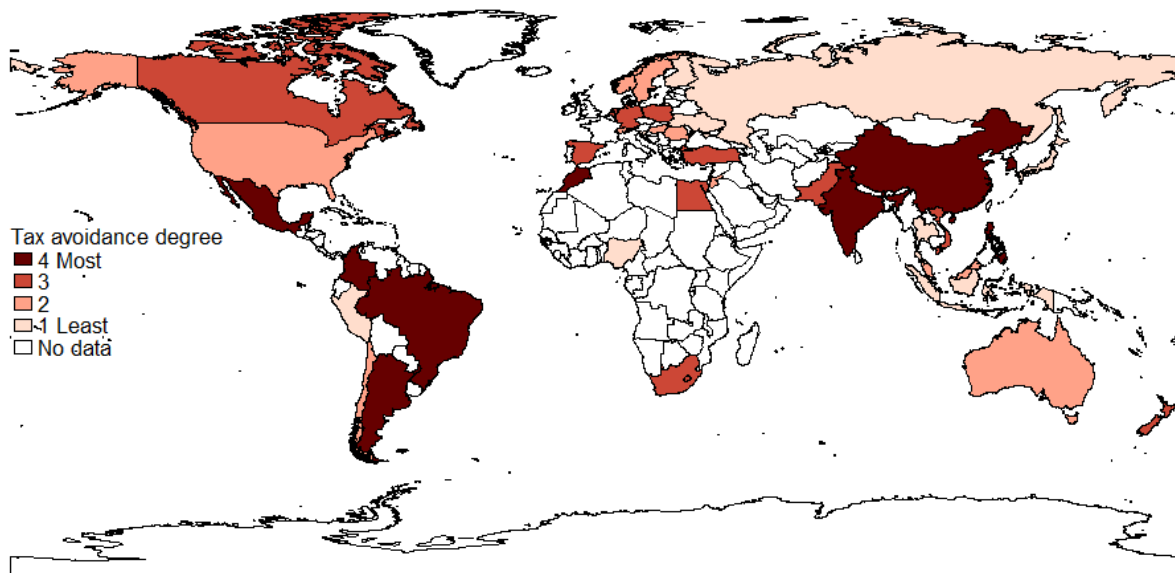


**Figure 2.** Validation of the leisure preference measure

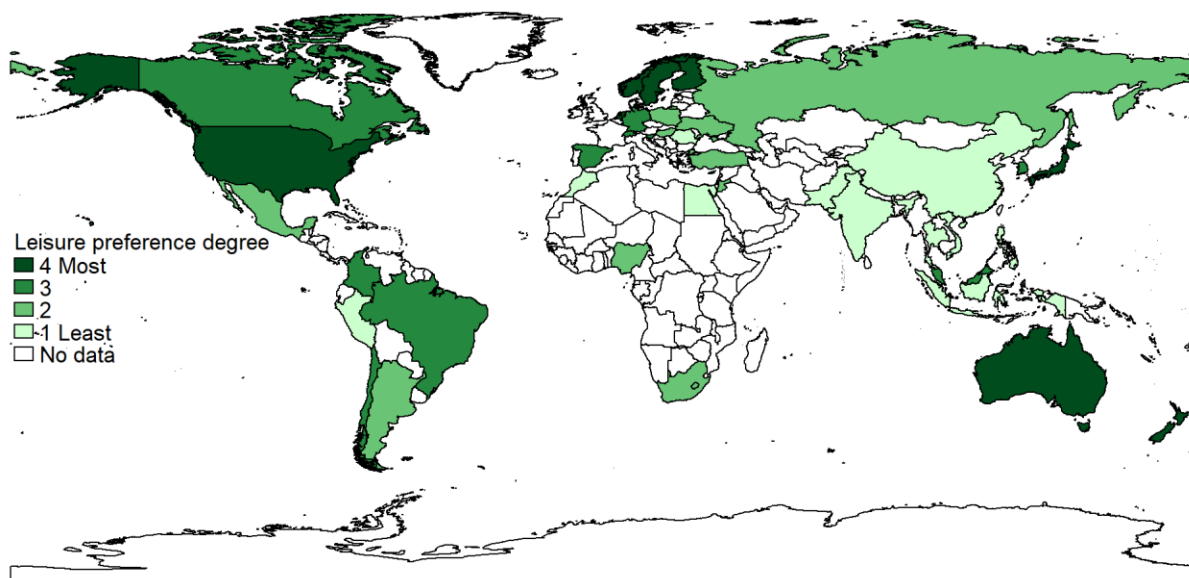


**Figure 3.** Tax avoidance and leisure preference by country

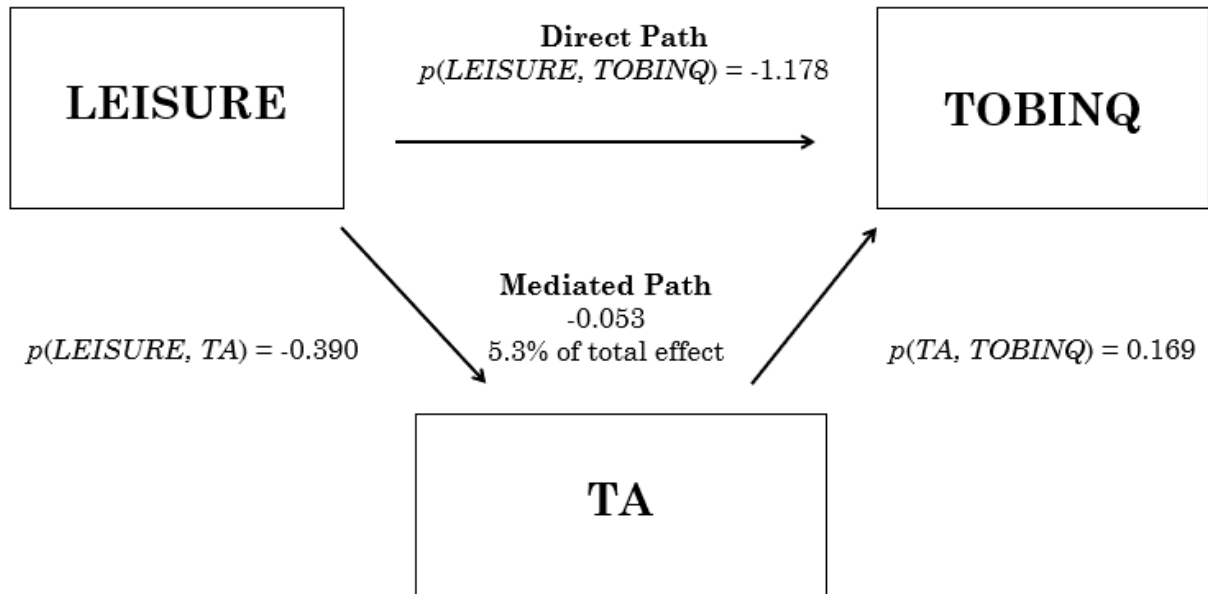
Panel A. Country-level tax avoidance around the world



Panel B. Leisure preference around the world (Source: World Values Survey)



**Figure 4.** Path analysis.



## Appendix A Variable Definition

VARIABLE	DEFINITION	SOURCE
TA	Following Atwood, Drake, Myers and Myers (2012) and Li, Maydew, Willis, and Xu (2017), we measure tax avoidance as pre-tax earnings before extraordinary items times statutory corporate income tax rate minus cash taxes paid, divided by pre-tax earnings before extraordinary items. We sum each element in the computation over three years (t, t+1, t+2). It is set to be missing if the denominator is less than or equal to zero.	Compustat
TOBINQ	We measure firm value as Tobin's Q, defined as the ratio of market value of equity plus the book value of debt to the book value of total assets. The book value of debt is the book value of total assets less the book value of equity less the deferred tax liability. We sum each element in the computation over three years (t, t+1, t+2).	Compustat
LEISURE	The percentage of survey respondents who believe leisure to be "very important" in their daily lives.	World Values Survey
WTR <sup>+</sup>	An indicator variable equal to 1 if a country implements any of the five work time reforms that advance leisure time.	CBR Leximetric Datasets
WTR <sup>-</sup>	An indicator variable equal to 1 if a country implements any of the five work time reforms that reduce leisure time.	CBR Leximetric Datasets
Relative Leisure	The percentage of survey respondents who believe leisure to be "very important" in their daily lives over the percentage of survey respondents who believe work to be "very important" in their daily lives.	World Values Survey
Residual Leisure	Regression residuals derived from regressing leisure preference on demographics, economic conditions, and governmental labor policies.	Author's calculation
TAXCOMP	The natural logarithm of time used to comply with tax law.	World Bank
TAXCONSULT	The natural logarithm of the number of tie-1 tax consultants.	International tax review
ROA	Pre-tax income less extraordinary items over total assets.	Compustat
SIZE	The natural logarithm of total assets.	Compustat
LEV	Sum of long-term debt and short-term debt over total assets.	Compustat
SALEGR	Sales growth, calculated as growth in sales revenue from the previous year.	Compustat
MULTI	An indicator variable equal to 1 if a firm's foreign exchange gain/loss is not missing, and 0 otherwise.	Compustat
RD	R&D expenses over total assets. Missing values are set to zero.	Compustat
INTAG	Intangible assets over total assets.	Compustat
PPE	Property, plant, and equipment over total assets.	Compustat
DA	Accruals quality estimated using the Dechow and Dichev (2002) model.	Compustat

DWC	Change in net non-cash working capital over total assets.	Compustat
DNCO	Change in net noncurrent operating assets over total assets.	Compustat
DFIN	Change in net financial asset over total assets.	Compustat
CAPX	Capital expenditure over total assets.	Compustat
ACQ	Acquisitions over total assets.	Compustat
EISSUE	Equity issuance, measured as equity sales minus equity repurchases over total assets.	Compustat
DISSUE	Debt issuance, measures as long-term debt issuance minus long-term debt reduction over total asset.	Compustat
INDHHI	Industry concentration, measured as revenue-based Herfindahl index.	Compustat
INTEREST	Interest expenses over total debt. Missing values are set to zero.	Compustat
DIVD	Common dividend over total assets.	Compustat
AGE	The natural logarithm of firm age, measured as current year minus the first year that a firm appears in Compustat.	Compustat
BTC	Required book-tax conformity calculated following Atwood et al. (2010).	Compustat
EARNVOL	Scaled decile rank of cross-sectional pre-tax earnings volatility by country-year.	Compustat
WW	An indicator variable equal to 1 if a country adopts the worldwide tax system and 0 if it adopts the territorial tax system.	KPMG tax table
TAXRATE	Statutory corporate income tax rate.	KPMG corporate tax rates table and Trading Economics
TR	Tax revenue as a percentage of GDP.	World Bank
GDP	The natural logarithm of GDP.	World Bank
FINDEV	Domestic credit provided by banking sector over GDP.	World Bank
LEGAL	Ease of shareholder suits index.	World Bank
CRP	Corruption Perception Index. A lower value indicates more corruption.	Transparency International
RISKAVR	The percentage of survey respondents who believe that adventure and taking risks are “not at all” important to their lives.	World Values Survey
TAXCHEAT	The percentage of survey respondents who believe that cheating on taxes is “always justifiable”.	World Values Survey
GOVTRUST	The percentage of survey respondents who have “a great deal” of confidence on government.	World Values Survey
TAXSYS	Average score of 16 different tax system attributes following Keller and Schanz (2013)	Keller and Schanz (2013)
YEAR	Fiscal year.	Compustat
IND	Fama-French 30 industry classification.	Compustat
COUNTRY	ISO country (LOC).	Compustat

**Appendix B**  
**Work Time Reforms**

	Annual Leave Entitlements	Public Holiday Entitlements	Limits to Overtime Working	Limits of Maximum Duration of the Normal Working Week	Limits of Maximum Daily Working Time
Argentina		2010(+), 2011(+)	2000(-)		
Australia		1996(-), 2009(+)			
Canada		2000(+)			
Chile		2004(+), 2006(+), 2008(+)		2005(+)	
China	2007(+)			2008(+)	
Finland			1996(-)		1996(+)
Germany	1995(+)				
Indonesia					2003(-)
Japan				1997(+)	
Jordan		2007(-)			
South Korea	1997(+), 2007(+)			2004(+)	
Malaysia		2012(+)			
Morocco		2005(-)			
New Zealand	2008(+)				
Poland		2010(+)	2006(-), 2009(-)	1997(+)	
Romania		2008(+)			
Turkey	2003(+)		2003(-)		2003(+)
Viet Nam		2007(+)			

**Table I**  
**Leisure Preference and Tax Planning by Country**

This table summarizes sample distribution by country and reports country mean tax planning and leisure preference.

<b>Country</b>	<b>Period</b>	<b>Obs.</b>	<b>TA</b>	<b>LEISURE</b>
Argentina	1997~2013	585	0.191	0.797
Australia	1994~2013	4,453	0.089	0.893
Brazil	2005~2013	1,583	0.189	0.858
Canada	1999~2008	3,989	0.131	0.879
Chile	1997~2013	1,587	0.047	0.875
China	1997~2013	21,222	0.173	0.579
Colombia	1997~2013	111	0.189	0.858
Cyprus	2005~2013	204	-0.142	0.880
Egypt	2003~2013	350	0.071	0.559
Finland	1994~2009	626	-0.012	0.921
Germany	1994~2013	4,704	0.116	0.846
Hungary	1998~2009	65	0.026	0.826
India	1997~2013	23,484	0.120	0.602
Indonesia	1999~2009	1615	-0.026	0.625
Japan	1993~2013	32,553	-0.040	0.890
Jordan	2003~2012	165	0.095	0.736
South Korea	1996~2013	5,111	0.231	0.877
Malaysia	2005~2013	4,867	0.014	0.864
Mexico	1993~2013	1,233	0.129	0.824
Morocco	2004~2011	250	0.233	0.532
Netherlands	2005~2013	806	0.026	0.940
New Zealand	1994~2010	542	0.056	0.879
Nigeria	2003~2013	230	0.055	0.859
Norway	1994~2009	692	0.065	0.936
Pakistan	1997~2011	863	0.133	0.507
Peru	1997~2013	889	-0.095	0.643
Philippines	1997~2013	817	0.091	0.554
Poland	1996~2013	2,157	0.033	0.844
Romania	2005~2013	373	0.007	0.747
Russian	2005~2013	1,140	-0.149	0.756
Singapore	1999~2013	2,750	-0.042	0.865
Slovenia	1998~2013	147	-0.033	0.865
South Africa	2001~2013	2,299	0.108	0.768
Spain	1992~2013	1,611	0.111	0.871
Sweden	1994~2013	2,273	0.042	0.945

**Table I – Continued**

Switzerland	1993~2009	1,275	0.023	0.886
Thailand	2005~2013	2,808	0.024	0.748
Turkey	1995~2013	1,397	0.016	0.849
Ukraine	2005~2013	57	-0.021	0.791
United States	1994~2013	54,629	0.135	0.892
Viet Nam	2004~2009	358	0.073	0.490
		<hr/> 186,870		



**Table II**  
**Descriptive Statistics**

This table reports descriptive statistics on our main regression variables. Columns (1) - (3) report descriptive statistics for the full sample and high and low leisure preference subsamples, respectively. Column (4) compares variables between strong and weak leisure preference countries.

	(1)		(2)		(3)		(4)	
	Full Sample		Weak Leisure Preference		Strong Leisure Preference		Difference (Strong - Weak)	
	Mean	Median	Mean	Median	Mean	Median	t value	z value
TA	0.089	0.118	0.110	0.150	0.068	0.090	-39.77***	-48.59***
LEISURE	0.802	0.873	0.707	0.705	0.896	0.891	407.7***	374.90***
ROA	0.080	0.063	0.084	0.067	0.076	0.060	-21.84***	-23.05***
SIZE (billion)	67.060	1.564	47.030	1.065	86.920	3.444	33.97***	77.85***
LEV	0.220	0.199	0.223	0.204	0.217	0.194	-7.335***	-10.09***
SALEGR	0.170	0.090	0.221	0.133	0.120	0.061	-56.01***	-76.63***
MULTI	0.447	0.000	0.479	0.000	0.416	0.000	-27.69***	-27.63***
RD	0.011	0.000	0.006	0.000	0.016	0.000	73.48***	126.50***
INTAG	0.071	0.009	0.041	0.002	0.101	0.019	99.40***	126.60***
PPE	0.325	0.289	0.346	0.317	0.303	0.263	-41.80***	-46.45***
DA	0.060	0.039	0.072	0.050	0.049	0.032	-74.87***	-79.50***
DWC	0.047	0.025	0.059	0.035	0.034	0.018	-30.32***	-32.45***
DNCO	0.037	0.018	0.046	0.028	0.028	0.011	-36.75***	-51.56***
DFIN	-0.007	0.000	-0.015	-0.004	0.000	0.001	29.21***	39.79***
BTC	0.380	0.429	0.453	0.488	0.308	0.262	-130.70***	-130.00***
EARNVOL	0.487	0.488	0.538	0.571	0.436	0.476	-89.96***	-88.68***
WW	0.759	1.000	0.831	1.000	0.687	1.000	-73.75***	-72.70***
TAXRATE	0.346	0.370	0.321	0.330	0.370	0.393	171.50***	169.60***
TR	0.120	0.106	0.119	0.109	0.120	0.104	3.548***	-48.95***
GDP (trillion)	5.216	4.446	3.144	1.471	7.270	5.231	204.20***	177.50***
FINDEV	1.712	1.587	1.118	1.214	2.301	2.263	434.20***	314.40***
LEGAL	7.181	8.000	6.241	7.000	8.114	8.000	230.70***	197.40***
CRP	6.058	7.100	4.614	3.600	7.489	7.500	414.40***	249.90***

**Table III**  
**Main Results on Leisure Preference and Tax Planning**

This table reports main results on leisure preference and tax planning. Variable definitions are in Appendix A. \*, \*\*, \*\*\* indicate statistical significance at the 10%, 5%, and 1% levels. Standard errors are clustered at the country level. T-statistics are in the parentheses.

	DV = TA			
	(1)	(2)	(3)	(4)
<i>LEISURE</i>	-0.912*** (-5.57)	-0.904*** (-5.52)	-0.348*** (-3.27)	-0.338*** (-3.24)
<i>ROA</i>		0.101 (1.41)		0.105 (1.45)
<i>SIZE</i>		-0.002 (-0.72)		-0.001 (-0.37)
<i>LEV</i>		0.050*** (2.75)		0.052*** (2.92)
<i>SALEGR</i>		0.021*** (3.36)		0.020*** (3.07)
<i>MULTI</i>		-0.015* (-1.84)		-0.014** (-2.10)
<i>RD</i>		0.282** (2.23)		0.298** (2.60)
<i>INTAG</i>		-0.033 (-1.44)		-0.043** (-2.10)
<i>PPE</i>		0.057*** (3.09)		0.052** (2.68)
<i>DA</i>		0.021 (0.49)		0.054 (1.36)
<i>DWC</i>		0.053*** (5.35)		0.051*** (7.00)
<i>DNCO</i>		0.076*** (2.76)		0.086*** (3.48)
<i>DFIN</i>		0.098*** (4.20)		0.100*** (4.21)
<i>BTC</i>			0.000 (0.00)	0.009 (0.44)
<i>EARNVOL</i>			0.012 (0.27)	0.020 (0.45)
<i>WW</i>			-0.061*** (-4.08)	-0.058*** (-3.73)
<i>TAXRATE</i>			0.776*** (2.75)	0.814*** (2.96)
<i>TR</i>			-0.053 (-0.06)	-0.187 (-0.23)

**Table III – Continued**

<i>GDP</i>			-0.168*** (-4.34)	-0.165*** (-4.35)
<i>FINDEV</i>			0.019 (0.51)	0.017 (0.45)
<i>LEGAL</i>			0.035* (1.74)	0.035* (1.91)
<i>CRP</i>			-0.011 (-0.64)	-0.013 (-0.72)
Constant	0.822*** (7.08)	0.785*** (7.12)	4.334*** (5.31)	4.199*** (5.18)
R <sup>2</sup>	0.176	0.187	0.200	0.211
Observation	186,870	186,870	186,870	186,870
Country FE	YES	YES	YES	YES
Year FE	YES	YES	YES	YES
Industry FE	YES	YES	YES	YES

**Table IV**  
**Robustness Checks**

This table reports regression results on robustness checks on alternative leisure preference measures (Panel A), alternative samples (Panel B), and alternative stories (Panel C). Variable definitions are in Appendix A. \*, \*\*, \*\*\* indicate statistical significance at the 10%, 5%, and 1% levels. Standard errors are clustered at the country level. T-statistics are in the parentheses.

Panel A: Alternative Leisure Preference Measures

	DV = TA	
	Alternative Leisure Preference Measure	
	(1)	(2)
	Relative Leisure Preference	Residual Leisure Preference
LEISURE	-0.236*** (-3.15)	-0.375*** (-3.27)
Constant	4.221*** (5.21)	4.315*** (4.76)
R <sup>2</sup>	0.211	0.211
Observation	186,870	185,852
Controls	YES	YES
Country FE	YES	YES
Year FE	YES	YES
Industry FE	YES	YES

Panel B Alternative samples

	DV = TA	
	(3)	(4)
	Country-Year medians	Country-Year-Industry medians
LEISURE	-0.565*** (-2.75)	-0.328** (-2.09)
Constant	2.407*** (3.05)	1.665** (2.19)
R <sup>2</sup>	0.710	0.379
Observation	503	10,569
Controls	YES	YES
Country FE	YES	YES
Year FE	YES	YES
Industry FE	NO	YES

**Table IV – Continued**

Panel C: Alternative Stories					
	DV = TA				
	(5)	(6)	(7)	(8)	(9)
	Effort Consuming Activities	Competition	Risk Aversion	Tax Related Beliefs	Tax System Heterogeneity
LEISURE	-0.336*** (-3.20)	-0.338*** (-3.25)	-0.449*** (-2.75)	-0.380*** (-4.72)	-0.338** (-2.63)
CAPX	-0.022 (-0.63)				
ACQ	-0.169*** (-5.53)				
EISSUE	0.024 (0.41)				
DISSUE	0.067** (2.35)				
INDHHI		-0.010 (-1.00)			
RISKAVR			-0.214 (-1.17)		
TAXCHEAT				0.806** (2.16)	
GOVTRUST				-0.123 (-0.81)	
TAXSYS					0.071 (0.70)
Constant	4.194*** (5.20)	4.211*** (5.20)	4.513*** (2.91)	4.258*** (5.24)	4.529*** (2.96)
R <sup>2</sup>	0.211	0.211	0.201	0.214	0.200
Observation	186,870	186,870	115,391	183,220	115,620
Controls	YES	YES	YES	YES	YES
Country FE	YES	YES	YES	YES	YES
Year FE	YES	YES	YES	YES	YES
Industry FE	YES	YES	YES	YES	YES

**Table V**  
**Evidence from Work Time Reforms**

This table reports difference-in-differences regression results using work time reforms as repeated shocks. The dependent variable is the current change in tax planning. Two indicator variables,  $WTR^+$  and  $WTR^-$ , denote work time reforms that advance and reduce leisure time of year  $t-1$ , respectively. Other independent variables are lagged changes in control variables. \*, \*\*, \*\*\* indicate statistical significance at the 10%, 5%, and 1% levels. Standard errors are clustered at the country level. T-statistics are in the parentheses.

	DV = Change in TA
$WTR^+$	-0.014** (-2.10)
$WTR^-$	-0.003 (-0.39)
Lagged change in ...	
$ROA$	-0.255*** (-6.48)
$SIZE$	-0.073*** (-4.71)
$LEV$	0.073** (2.46)
$SALEGR$	0.004 (1.44)
$MULTI$	-0.000 (-0.24)
$RD$	0.184* (1.88)
$INTAG$	-0.007 (-0.45)
$PPE$	-0.035*** (-3.30)
$DA$	0.078*** (4.22)
$DWC$	0.008 (1.28)
$DNCO$	0.011* (1.93)

**Table V - Continued**

<i>DFIN</i>	0.012 (1.38)
<i>BTC</i>	-0.020 (-0.78)
<i>EARNVOL</i>	-0.010 (-0.23)
<i>WW</i>	-0.020*** (-3.26)
<i>TAXRATE</i>	0.036 (0.15)
<i>TR</i>	0.726 (1.23)
<i>GDP</i>	-0.133* (-1.80)
<i>FINDEV</i>	-0.016 (-0.65)
<i>LEGAL</i>	0.023* (1.72)
<i>CRP</i>	0.004 (0.27)
Constant	-0.031** (-2.13)
R <sup>2</sup>	0.054
Observation	134,663
Industry-Year FE	YES

**Table VI**  
**Economic Mechanism**

This table tests for the economic mechanism behind the association between leisure preference and tax planning. Column (1) interacts leisure preference with tax complexity (*TAXCOMP*). Column (2) interacts leisure preference with tax consulting (*TAXCONSULT*). \*, \*\*, \*\*\* indicate statistical significance at the 10%, 5%, and 1% levels. Standard errors are clustered at the country level. T-statistics are in the parentheses.

	DV = TA	
	(1)	(2)
<i>LEISURE</i>	2.015* (1.72)	-1.362*** (-4.01)
<i>LEISURE * TAXCOMP</i>	-0.388** (-2.04)	
<i>LEISURE * TAXCONSULT</i>		0.592*** (3.22)
<i>ROA</i>	0.106 (1.45)	0.105 (1.41)
<i>SIZE</i>	-0.001 (-0.33)	-0.001 (-0.39)
<i>LEV</i>	0.051*** (2.87)	0.051*** (2.90)
<i>SALEGR</i>	0.020*** (3.07)	0.020*** (2.98)
<i>MULTI</i>	-0.013** (-2.07)	-0.014** (-2.13)
<i>RD</i>	0.297** (2.58)	0.302** (2.66)
<i>INTAG</i>	-0.042** (-2.07)	-0.042* (-2.03)
<i>PPE</i>	0.052** (2.70)	0.052** (2.67)
<i>DA</i>	0.054 (1.35)	0.058 (1.44)
<i>DWC</i>	0.051*** (6.96)	0.050*** (6.80)
<i>DNCO</i>	0.085*** (3.44)	0.085*** (3.36)
<i>DFIN</i>	0.100*** (4.21)	0.100*** (4.13)



**Table VI – Continued**

<i>BTC</i>	0.007 (0.33)	0.002 (0.08)
<i>EARNVOL</i>	0.026 (0.75)	0.034 (0.70)
<i>WW</i>	-0.059*** (-4.17)	-0.056*** (-3.55)
<i>TAXRATE</i>	0.804*** (3.05)	0.774*** (2.83)
<i>TR</i>	-0.286 (-0.35)	-0.142 (-0.17)
<i>GDP</i>	-0.161*** (-4.19)	-0.168*** (-4.25)
<i>FINDEV</i>	0.017 (0.48)	0.019 (0.50)
<i>LEGAL</i>	0.038** (2.31)	0.031 (1.63)
<i>CRP</i>	-0.012 (-0.72)	-0.011 (-0.60)
Constant	4.101*** (5.01)	4.330*** (5.09)
R <sup>2</sup>	0.211	0.213
Observation	186,870	184,435
Country FE	YES	YES
Year FE	YES	YES
Industry FE	YES	YES

**Table VII**  
**Leisure Preference and Firm Value**

This table reports results on leisure preference and firm value. The dependent variable is firm value measured as Tobin's Q. Columns (1) – (4) add different sets of control variables. Variable definitions are in Appendix A. \*, \*\*, \*\*\* indicate statistical significance at the 10%, 5%, and 1% levels. Standard errors are clustered at the country level. T-statistics are in the parentheses.

	DV = <i>TOBINQ</i>			
	(1)	(2)	(3)	(4)
<i>LEISURE</i>	-0.506** (-2.09)	-0.550** (-2.10)	-1.022* (-1.95)	-1.244*** (-3.16)
<i>ROA</i>		4.390*** (19.68)		4.335*** (17.68)
<i>SIZE</i>		-0.025 (-0.88)		-0.031 (-1.00)
<i>LEV</i>		0.362*** (3.94)		0.357*** (4.02)
<i>RD</i>		6.619*** (4.20)		6.681*** (4.33)
<i>INTAG</i>		-0.152 (-1.12)		-0.144 (-1.05)
<i>PPE</i>		-0.277*** (-4.28)		-0.280*** (-4.44)
<i>DA</i>		0.744*** (5.23)		0.733*** (4.91)
<i>DWC</i>		0.175* (1.88)		0.187* (2.00)
<i>DNCO</i>		0.126 (1.00)		0.134 (1.07)
<i>DFIN</i>		0.432*** (4.04)		0.433*** (4.09)
<i>CAPX</i>		0.771** (2.58)		0.850*** (3.04)
<i>INTEREST</i>		0.078** (2.39)		0.066* (1.94)
<i>DIVD</i>		4.890*** (4.34)		5.226*** (5.55)

**Table VII - Continued**

<i>AGE</i>		-0.059 (-1.14)		-0.055 (-0.96)
<i>BTC</i>			-0.386*** (-3.25)	-0.190 (-1.51)
<i>EARNVOL</i>			-0.191 (-0.60)	-0.193 (-0.57)
<i>WW</i>			0.052 (0.83)	0.083 (1.28)
<i>TAXRATE</i>			0.356 (0.57)	1.289** (2.12)
<i>TR</i>			3.682 (1.45)	2.016 (0.73)
<i>GDP</i>			-0.048 (-0.40)	0.020 (0.16)
<i>FINDEV</i>			-0.129 (-0.96)	-0.132 (-1.07)
<i>LEGAL</i>			0.079 (0.82)	0.129* (1.71)
<i>CRP</i>			-0.081** (-2.23)	-0.088** (-2.52)
Constant	1.761*** (8.37)	1.698*** (5.43)	2.748 (0.83)	0.540 (0.15)
R <sup>2</sup>	0.165	0.308	0.169	0.313
Observation	151,584	151,584	151,584	151,584
Country FE	YES	YES	YES	YES
Year FE	YES	YES	YES	YES
Industry FE	YES	YES	YES	YES

**Table VIII**  
**Path Analysis**

This table performs path analysis using Sobel test. The direct path is from leisure preference (LEISURE) to firm value (TOBINQ). The indirect path is from leisure preference to tax planning (TA) and, further, from tax planning (TA) to firm value (TOBINQ).

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Direct Path	
$p(LEISURE, TOBINQ)$	-1.178***
Mediated Path for <i>TA</i>	
$p(LEISURE, TA)$	-0.390***
$p(TA, TOBINQ)$	0.169***
Total Mediated Path for <i>TA</i>	-0.066***
Proportion of Mediated Effect to Total Effect	0.053
Controls	YES
Observation	151,584
Country FE	YES
Year FE	YES
Industry FE	YES

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